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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/476,776 12/30/99 SHIOMI

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WM51/1025

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EXAMINER

CHU, K

ART UNIT

PAPER NUMBER

2651

DATE MAILED:

10/25/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/476,776

Applicant(s)

SHIOMI et al.

Examiner

Kim-Kwok CHU

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in claim 1, line 15, the term "for rotating said pickup chassis" is not clear. In general, a pickup chassis can be tilted, slide forward and backward but it can not be rotated in any direction or any axis. Applicant should clarify how said stepping motor rotates said chassis; and

(b) similarly, in claim 8, line 4, the term "rotationally supported" is not clear because a chassis (base, support) can not be rotated. A chassis can be tilted, slided or swing etc. Applicant should clarify what is a rotating chassis.

3. The claims not specifically mentioned above are indefinite based upon their dependence on an indefinite claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.*

5. Claims 1, 8-11 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Takizawa et al. (U.S. Patent 5,311,497).

Takizawa teaches an optical pickup with a tilting mechanism having all of the elements and steps as recited in claims 1, 8-11 and 13. For example, Takizawa teaches the following:

(a) a spindle chassis for rotationally supporting a turntable on which an optical disk D is placed (Fig. 2);

(b) a pickup chassis rotationally supported on said spindle chassis, for movably supporting an optical pickup device 37 (Fig. 2);

(c) said pickup 37 being movable toward and away from the turntable (Fig. 2);

(d) a tilt mechanism for adjusting tilt angle of said optical pickup device to a neutral position (Fig. 2; column 12, lines 40-42);

(e) a stepping motor for rotating said pickup chassis with respect to said spindle chassis (Fig. 2, column 13, lines 29-30);

(f) a control circuit for driving said stepping motor to set tilt angle at a predetermined neutral position (Fig. 2; tilting control circuit is an inherent feature when an optical head has a tilting means);

(g) as in claim 8, a first chassis assembly 8 (Fig. 2);

(h) as in claim 8, a second chassis 4 rotationally supported on said first chassis;

(i) as in claim 9, said control circuit having memory storage (inherent feature where a control circuit must be equipped with a storage device/table to store inputs, reference values and outputs);

(j) as in claim 10, a stepping motor (Fig. 2, column 13, lines 29-30);

(k) as in claim 11, a cam engaged with said stepper motor and a spiral surface 44 mechanically engaged with said second chassis assembly 4 (Fig. 6; a cam is an inherent feature where a motor uses it to drive other components);

(l) as in claim 13, rotating a drive unit in a first direction until the tilt mechanism reaches a predetermined reference position (Fig. 2; inherent feature because tilt position is predetermined and not random); and

(m) as in claim 13, rotating the drive unit in a second direction opposite to the first direction, a predetermined number of rotations thereby positioning the tilt mechanism to the predetermined neutral position (Fig. 2; inherent feature where tilt angle cannot be set at one time but in a damping motion).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-7, 12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al. (U.S. Patent 5,311,497).

Takizawa teaches an optical disk tilting mechanism having means and steps very similar to that of the instant invention. However, Takizawa does not teach the following:

(a) as in claims 2-7 and 13-20 said control circuit drives said stepping to various positions such as neutral position, reference position etc. and then store it;

(b) as in claim 12, a protrusion extending from said second chassis; and

(c) as in claim 12, a biasing device attached to said first chassis.

Although above item (a) is not taught by Takizawa, they are not novel. For example, a typical tilting mechanism to set a titling angle on a pickup must have various positions such as neutral, reference etc. so that the control circuit knows its present position and a preferred position going to be adjusted.

On the other hand, the applicant has not disclosed that any specific positions adapted by his tilting mechanism overcome any deficiency in the prior art or as for any stated purpose. The examiner takes Official Notice of this teaching as being known to these of ordinary skill in the art.

Furthermore, mechanical components such as protrusion means and biasing means are not novel in a tilting chassis. They are design choice of mechanical parts to achieving tilting an angle. In other words, other mechanical parts can do the same function. And besides, the applicant has not disclosed that any specific parts adapted by his tilting mechanism overcome any deficiency in the prior art or as for any stated purpose. The examiner takes Official Notice of this teaching as being known to these of ordinary skill in the art.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimoi (6,021,104) is pertinent because Shimoi teaches a disc tray mounting movement and an adjustment for the tilt relative to the disc.

Hashi et al. (5,784,229) is pertinent because Hashi teaches a driving apparatus having a capstan tilt adjustment means.

Kim (5,493,560) is pertinent because Kim teaches a chassis titling means.

Abe (5,081,618) is pertinent because Abe teaches a chassis titling means in a disk player.

Suzuki et al. (5,058,097) is pertinent because Suzuki teaches a slider and its inclination adjustment means.

9. Any response to this action should be mailed to:
Commissioner of Patents and Trademarks Washington, D.C.
20231 or faxed to:
(703) 305-9051, (for formal communications intended for
entry) or:
(703) 305-9731, (for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor
(Receptionist).

Any inquiry of a general nature or relating to the status
of this application should be directed to the Group
receptionist whose telephone number is (703) 305-3900.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kim CHU
whose telephone number is (703) 305-3032.

kc 10/20/2000
Kim-kwok CHU
Examiner AU2651
October 20, 2000

(703) 305-3032

TAN DINH
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PRIMARY EXAMINER